

structures 100 in Fig.1A to Fig.1C are partially or totally perforated by virtue of an impression process in a direction from the top face 12 to the bottom face 14, which forms a plurality of tiny gaps 15 on the structures 102 in Fig.2A to Fig.2C. After the impression process, the structures 100 in Figs.1A to 1C are permanently damaged, forming the structures 102 in Figs.2A to 2C, respectively. When the structure 102 is in a static state, and without any external stress applied to it, the gaps 15 are approximately closed (pseudo-closed) and the surface of the structure 102 has a pseudo-planar topography with multiple phases. When the structure 102 swells due to external pressure, the gaps 15 enlarge.

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In the claims:

1. (Third amended) A composite film comprising:

a polymer composite layer having two sides with a plurality of tiny gaps, each of the gaps comprising two edges approximately in contact with each other to form an approximately closed gap when a pressure difference between the two sides of the composite film is approximately zero; and

a nonstick sealing layer attached to one side of the polymer composite layer to seal the gaps and make the gaps become air impermeable when the pressure difference is approximately zero;

wherein when the pressure difference between the two sides of the composite film increases, each of the gaps are enlarged by the air pressure exerted on one side of the composite film and become air permeable,

D2 and restore again while the pressure difference is removed.

D3 10. (Third amended) A composite film comprising a first
5 layer, and a second layer laminated on the first layer,
the composite film comprising a top face on the first
layer and a bottom face on the second layer, the composite
film being processed by virtue of an impression process,
thereby forming a plurality of tiny gaps, each of the
10 gaps comprising two edges approximately in contact with
each other to form an approximately closed gap when
a pressure difference between the two sides of the
composite film is approximately zero wherein when the
pressure difference between the two sides of the
15 composite film increases, each of the gaps are enlarged
by the air pressure exerted on one side of the composite
film and become air permeable, and restore again while
the pressure difference is removed.

NE 20 Claim 44 is canceled.